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Our ref: KOY-9

Client's ref: F0893-US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re Application of: Y. USAGAWA et al: Art Unit: 1752

Serial No. : 10/686,062 :

Examiner: T. Chea

Filed : October 15, 2003 :

Title : PHOTOTHERMOGRAPHIC IMAGING MATERIAL : :

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DECLARATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

I, Narito Goto, hereby declare and say as follows:

1. I presented the Declarations dated April 22, 2005 and August 17, 2005 in this application.

2. I am aware that the Examiner has rejected this application based on the combination of Murray (U.S. 5,686,228) and Yamada (U.S. 6,586,170) and based on Yamada alone. For the rejection based on the combination of Murray and Yamada, I am aware that the Examiner believes that it would be obvious to replace the Permanax WSO (ortho reducing agent) of Murray with a para reducing agent of formula (2a) based on the teachings of Yamada.

3. Inventive sample 107 was prepared in accordance with sample 107 appearing in Table 2 on page 253 of the present application. As shown in Table 2, Inventive sample 107 contained a compound of formula (1) and compound (2)-1 of formula (2a) of the present invention. Compound (2)-1 is a para reducing agent as shown on page 44 of the application.

4. Comparative sample 900 was prepared in the same manner as Inventive sample 107, except that the para reducing agent compound (2)-1 was replaced by the ortho reducing agent Permanax WSO appearing in col. 19, lines 3-4 of Murray.

5. The photographic performance of Inventive sample 107 and Comparative sample 900 was evaluated in the manner described on pages 250-252 of the present application. The evaluation results are illustrated in the attached Table 9-1.

6. Table 9-1 demonstrates that Inventive sample 107 employing compound (2)-1 (para reducing agent) is superior to Comparative sample 900 employing Permanax WSO (ortho reducing agent). Specifically, Table 9-1 demonstrates that Inventive sample 107 is superior to Comparative sample 900 in photographic fog, sensitivity and image stability.

7. I believe that a skilled person in the art would be surprised that a photothermographic material would be improved by employing the para reducing agent of formula (2a) of the present invention instead of the Permanax WSO ortho reducing agent of Murray. I therefore believe that results of the present invention produced by the combination of formula (1) and formula (2a) is unexpected based on the teachings of Murray and Yamada.

8. For the rejection based on Yamada alone, I am aware that the Examiner believes that formula (1) of the present invention having R_{02} as methyl, ethyl, $-C(CH_3)_3$, cyclohexyl, propyl or $-CH(CH_3)_2$ is equivalent to the other alkene derivatives in cols. 2-12 of Yamada having a different R_{02} substituent.

9. Inventive samples 901-906 and Comparative samples 907-926 were prepared in the same manner as sample 1* in Table 32 of col. 90 of Yamada, except that 4.4 x 10^{-5} mol of the alkene derivatives shown in the attached Table 9-2 and 3.5 x 10^{-5} mol of compound R-I-5 in Table 23 of col. 64 of Yamada were further respectively added. The substituent R_{02} in Inventive samples 901-906 was respectively methyl, ethyl, $-C(CH_3)_3$, cyclohexyl, propyl and $-CH(CH_3)_2$. The alkene derivatives of Comparative samples 907-926 were randomly selected from cols. 5-12 of Yamada.

10. The photographic performance of Inventive samples 901-906 and Comparative samples 907-926 was evaluated in the manner described on pages 250-252 of the present application, except that the materials were exposed using a semi-conductor laser with a wavelength of 780 nm. The evaluation results are illustrated in the attached Table 9-2.

11. Table 9-2 demonstrates that Inventive samples 901-906 having the substituent R_{02} within the scope of the claimed formula (1) were superior to Comparative samples 907-926 having the other alkene derivatives in cols. 2-12 of Yamada. Specifically, Table 9-2 demonstrates that Inventive samples 901-

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906 are superior to Comparative samples 907-926 in photographic fog, sensitivity and image stability.

12. I believe that a skilled person in the art would be surprised that a photothermographic material would be improved by employing a compound of formula (1) having the specific R_{02} substituent compared to the other alkene derivatives of Yamada. I therefore believe that results of the present invention produced by the combination of formula (2a) with formula (1) having the specific R_{02} substituent is unexpected based on the teachings of Yamada.

It is declared by undersigned that all statements made herein of undersigned's own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the U.S. Code; and that such willful false statements may jeopardize the validity of this Application or any patent issuing thereon.

Narito Goto

Narito Goto

Dated: This 10th day of July , 2006.
Attached: Tables 9-1 and 9-2

Table 9-1

Sample No.	Compound of Formula(1)	Compound of Formula(2a)	Type of Binder	Photographic Performance at Prompt treatment		Image Stability			Remarks
				Photographic Fog	Sensitivity	ΔPhotographic Fog	ΔMax	Color Tone	
107	(1)-133	(2)-1	PVB−1	0.03	107	0.03	0.10	6	Inv.
900	(1)-133	PERMANAX WSO	PVB−1	0.08	102	0.07	0.29	3	Comp.

Table 9-2 (1/2)

Sample No.	Compound of Formula(1)	Compound of Formula(2a)	Photographic Performance at Prompt treatment		Image Stability			Remarks
			Photographic Fog	Sensitivity	ΔPhotographic Fog	ΔMax	Color Tone	
901	(1)-5	Compound R-I-5 of Yamada	0.03	107	0.03	0.10	6	Inv.
902	(1)-12	Compound R-I-5 of Yamada	0.03	107	0.03	0.11	6	Inv.
903	(1)-39	Compound R-I-5 of Yamada	0.03	106	0.04	0.12	6	Inv.
904	(1)-43	Compound R-I-5 of Yamada	0.04	106	0.03	0.12	6	Inv.
905	(1)-57	Compound R-I-5 of Yamada	0.04	107	0.04	0.11	6	Inv.
906	(1)-117	Compound R-I-5 of Yamada	0.04	107	0.04	0.11	6	Inv.
907	Compound 1 of Yamada	Compound R-I-5 of Yamada	0.09	100	0.10	0.32	2	Comp.
908	Compound 3 of Yamada	Compound R-I-5 of Yamada	0.08	102	0.09	0.31	2	Comp.
909	Compound 7 of Yamada	Compound R-I-5 of Yamada	0.08	103	0.08	0.32	2	Comp.
910	Compound 11 of Yamada	Compound R-I-5 of Yamada	0.07	102	0.09	0.33	2	Comp.
911	Compound 16 of Yamada	Compound R-I-5 of Yamada	0.10	102	0.11	0.35	2	Comp.
912	Compound 21 of Yamada	Compound R-I-5 of Yamada	0.09	100	0.10	0.31	3	Comp.
913	Compound 22 of Yamada	Compound R-I-5 of Yamada	0.09	101	0.10	0.32	3	Comp.
914	Compound 27 of Yamada	Compound R-I-5 of Yamada	0.08	101	0.09	0.29	2	Comp.
915	Compound 33 of Yamada	Compound R-I-5 of Yamada	0.10	103	0.12	0.34	2	Comp.

Table 9-2 (2/2)

Sample No.	Compound of Formula(1)	Compound of Formula(2a)	Photographio Performance at Prompt treatment		Image Stability			Remarks
			Photographic Fog	Sensitivity	ΔPhotographio Fog	ΔMax	Color Tone	
916	Compound 34 of Yamada	Compound R- I -5 of Yamada	0.10	102	0.11	0.35	2	Comp.
917	Compound 37 of Yamada	Compound R- I -5 of Yamada	0.09	101	0.13	0.34	2	Comp.
918	Compound 40 of Yamada	Compound R- I -5 of Yamada	0.08	103	0.12	0.32	3	Comp.
919	Compound 47 of Yamada	Compound R- I -5 of Yamada	0.10	102	0.11	0.33	2	Comp.
920	Compound 49 of Yamada	Compound R- I -5 of Yamada	0.11	103	0.12	0.33	2	Comp.
921	Compound 51 of Yamada	Compound R- I -5 of Yamada	0.11	103	0.11	0.34	2	Comp.
922	Compound 55 of Yamada	Compound R- I -5 of Yamada	0.12	103	0.13	0.35	2	Comp.
923	Compound 57 of Yamada	Compound R- I -5 of Yamada	0.11	101	0.12	0.32	3	Comp.
924	Compound 60 of Yamada	Compound R- I -5 of Yamada	0.12	102	0.13	0.34	3	Comp.
925	Compound 65 of Yamada	Compound R- I -5 of Yamada	0.10	103	0.12	0.31	2	Comp.
926	Compound 66 of Yamada	Compound R- I -5 of Yamada	0.09	102	0.10	0.29	2	Comp.